

Work Order ID 148436

June 29, 2016 2:09:34 PM

148436

+ Also Attached.
W10 139768 (Split Costed)

Page 1

Item ID: D4617-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Emergency Escape Ladder
 Start Date: 6/30/2016 Start Qty: 2.00 ***2*** / **SH** Cust Item ID:
 Required Date: 8/3/2016 Req'd Qty: 2.00 ***2*** / Customer:
 Reference:

Approvals: Process Plan: SH Date: Jun 29/16 Tooling: _____ Date: _____ / Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ / Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4617	B

100

100

CNC Bend 1

CNC Delta 100 Bender

Memo

BEND RAIL AS PER DWG AND TO FIT PROFIL OF WELDING JIG DT9803
(ON LENGTH OF TUBE, 20 FEET MAKES 2 RAILL)

***BENDER SET UP SAME AS BASKET RIB, TOWERS ON NARROW,
RAM AT 2000 PTS FOR BENDING RADIUS***

0.00

0.00

NA - Done on W/O
SH 6/29/16 139768-2

110

110

Large Fab

Large Fab

Weld per dwg A/R 4130 rod Batch: _____

0.00

Memo

1- CUT STEPS AS PER DWG AND PREP FOR WELDING

2- CUT RAIL

3- INSTALL PARTS ON WELDING JIG DT9803 AND WELD AS PER DWG

0.64

~~NA~~

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	Pressure/Forced ☐		Temperature/Cure ☐		Power Loss/Surge ☐	
Design ☐	☐ Operator	Bending ☐		Set-up ☐		Folio/Program ☐	
Doc/Data ☐	☐ Offset/Setup	Centre Not Concentric ☐		BOM/Route ☐		Grain ☐	
Equip/Tooling ☐	☐ Supplier	Cracks ☐		Broken/Damage/Defect ☐		Weld ☐	
Handling/Pre ☐	☐ Training	Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐	
Material ☐	☐ Use for Testing	Cuffs ☐		Contamination ☐		Out of Sequence ☐	
Internal Transport ☐	☐ Poor Information	Crushing ☐		Countersink ☐		Off-set ☐	
Tribal Knowledge ☐	☐ Rushing	Heat Treat ☐		Cut Too Short ☐		Mislabeled ☐	
LOA ☐	☐ Product Improvement	Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐		Fit/Function ☐	
Substation ☐	☐ Process Improvement	Marks/Chatter ☐		Drill Holes ☐		Misaligned/off center ☐	
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : ☐					
Misidentified ☐	☐ Past Due						

Work Order ID 148436***148436***

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Item ID: D4617-041 Accept ***N900040100*** Setup Start ***NS1***
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Item Name: Emergency Escape Ladder
Start Date: 6/30/2016 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 8/3/2016 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
120									
QC	Memo	0.00							
Quality Control									
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.01							
Quality Control									
140	Pressure Wash per QSI005 4.3	0.00							
140									
HandFinish	Memo	0.00							
Hand Finishing									

NA Done on W/O
139 768-2
SA 6/29/16



DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

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Item ID: D4617-041 Accept ***N900040100*** Setup Start ***NS1***
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Item Name: Emergency Escape Ladder
Start Date: 6/30/2016 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 8/3/2016 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150	Fire Red(Ref:4.3.5.10) per QSI005 4.3	0.00							
-----	---------------------------------------	------	--	--	--	--	--	--	--

150

Powdercoat
Powder Coating

Memo
START TIME: _____
OVEN TEMPERATURE: _____
FINISH TIME: _____

0.08

NA - Done on W/10

8/6/29/16 | 139768-2



160	QC3- Inspect Part Finish	0.00							
-----	--------------------------	------	--	--	--	--	--	--	--

160

QC
Quality Control

Memo 0.00

170		0.00							
-----	--	------	--	--	--	--	--	--	--

170

Small Fab
Small Fab

Memo 0.27
1- Assemble clamps, clamps cover and tube caps to ladder as per dwg
2- Install decals as per dwg

1 FF

JUN 29 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

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Item ID: D4617-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Emergency Escape Ladder
 Start Date: 6/30/2016 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 8/3/2016 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.01				1			DAS 38 JUN 30 2016
190 *190* Packaging Packaging	Identify as per dwg & Stock Location <i>pk</i> Memo	0.00 0.00				1			JUL 04 2016 DAS 6 8-29
200 *200* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.03							16/7/6 <i>[Signature]</i> W 16/7/6 OS MCS JUL 04 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date : _____	Step #: _____	QTY Effective : _____			MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY				
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
		OTHER : _____				

Picklist Print

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Page 1

Work Order ID: 148436

148436

Parent Item: D4617-041

D4617-041

Parent Item Name: Emergency Escape Ladder

Start Date: 6/30/2016

Required Date: 8/3/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 12.04.12 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.750W.035		Purchased	No			100	f	88.0000	20	42.10526			
M4130NT0 750W 035									**				
4130 RD TUBE .750 X .035W													
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						MAT033		88					
						121910		88					
M4130NT0.750W.035		Purchased	No			110	f	88.0000	5.06	10.65263			
M4130NT0 750W 035									**				
4130 RD TUBE .750 X .035W													
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						MAT033		88					
						121910		88					
D4617-045		Manufactured	No			170	Each	0.0000	4	8			
D4617-045									**				
Clamp Assembly													
D4618-041		Manufactured	No			170	Each	17.0000	4	8			
D4618-041									**				
Clamp Assembly Cover													
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						st113		17					
						139782		17					
D4621-1		Manufactured	No			170	Each	6.0000	2	4			
D4621-1									**				
Decal													
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						st113		6					
						147433		6		6/20/2017			

- Done
w/6/30/2017
ATTN
JPC

Done on
w/139768-2
ATTACHED
JD

Picklist Print

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Page 2

Work Order ID: 148436

148436

Parent Item: D4617-041

D4617-041

Parent Item Name: Emergency Escape Ladder

Start Date: 6/30/2016

Required Date: 8/3/2016

Start Qty: 2.00

Required Qty: 2.00

D4621-3

Manufactured No

170

Each

6.0000

1

2

D4621-3

Decal

Location

Loc Qty

Loc Code

st113

6

147701

6

6/20/2017

D4625-1

Manufactured No

170

Each

56.0000

4

8

D4625-1

Tube Cap

Location

Loc Qty

Loc Code

ST114

56

83122

56

Done on
wb 139768-2
ATTACHED
JA

Work Order ID 139768-2

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Page 1

Item ID: D4617-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Emergency Escape Ladder

Stop *NS2*

Start Date: 12/7/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 12/24/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

20151207

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4617

B

100

0.00

100

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

BEND RAIL AS PER DWG AND TO FIT PROFIL OF WELDING JIG DT9803
(ON LENGTH OF TUBE, 20 FEET MAKES 2 RAILL)

***BENDER SET UP SAME AS BASKET RIB, TOWERS ON NARROW,
RAM AT 2000 PTS FOR BENDING RADIUS***

110

Weld per dwg A/R 4130 rod Batch: 12127925 0.00

110

Large Fab

Large Fab

Memo

0.13

1- CUT STEPS AS PER DWG AND PREP FOR WELDING

2- CUT RAIL

3- INSTALL PARTS ON WELDING JIG DT9803 AND WELD AS PER DWG

Handwritten notes and signatures: 16-2-10, 3 EL 16-3-8

Work Order ID 139768

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Page 2

Item ID: D4617-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Emergency Escape Ladder
 Start Date: 12/7/2015 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 12/24/2015 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
120									
QC	Memo	0.00							
Quality Control									
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									
140	Pressure Wash per Q81005 4.3	0.00							
140									
HandFinish	Memo	0.00							
Hand Finishing									

③ 16-03-03 DAS
9-89

③ 16-03-03 DAS
9-89

N/A
16-03-03

Work Order ID 139768

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Page 3

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 Required Date: 12/24/2015 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	Fire Red(Ref:4.3.5.10) per OSI005 4.3 <i>M 129223</i> Memo START TIME: <i>3:35</i> OVEN TEMPERATURE: <i>330°</i> FINISH TIME: <i>4:20</i>	0.00 0.02				<i>3</i>	<i>4</i>	<i>16-03-8</i>	<i>34</i>
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>(3)</i>			DAS 33 9-89 MAR 09 2016
170 *170* Small Fab Small Fab	Memo 1- Assemble clamps, clamps cover and tube caps to ladder as per dwg 2- Install decals as per dwg	0.00 0.05				<i>1</i>	<i>FF</i>	<i>JUN 29 2016</i>	

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[illegible]

Picklist Print

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Page 1

Work Order ID: 139768

139768

Parent Item: D4617-041

D4617-041

Parent Item Name: Emergency Escape Ladder

Start Date: 12/7/2015

Required Date: 12/24/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 12.04.12 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.750W.035		Purchased	No			100	f	168.0000	20	84.21053			

M4130NT0 750W 035

4130 RD TUBE .750 X .035W

**

EL 16-2-10

Location

Loc Qty

Loc Code

MAT033

168

121910

168

M4130NT0.750W.035

Purchased

No

M4130NT0 750W 035

4130 RD TUBE .750 X .035W

110

f

168.0000

5.06

21.30526

**

Location

Loc Qty

Loc Code

MAT033

168

121910

168

D4617-045

Manufactured

No

D4617-045

Clamp Assembly

170

Each

6.0000

4

16

**

Location

Loc Qty

Loc Code

st113

6

119307

4

95579

2

D4618-041

Manufactured

No

D4618-041

Clamp Assembly Cover

170

Each

1.0000

4

16

**

Location

Loc Qty

Loc Code

st113

1

84410

1

B 147294 ② B 143330 ②

4

139818x9

139782x7

MAR 23 2016

Picklist Print

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Work Order ID: 139768

139768

Parent Item: D4617-041

D4617-041

Parent Item Name: Emergency Escape Ladder

Start Date: 12/7/2015

Required Date: 12/24/2015

Start Qty: 4.00

Required Qty: 4.00

D4621-1	Manufactured	No	170	Each	0.0000	2	8	DAS 8 9-09
D4621-1						**	<u>139783</u>	
Decal								
D4621-3	Manufactured	No	170	Each	0.0000	1	4	DAS 8 9-09
D4621-3						**	<u>139784</u>	
Decal								
D4625-1	Manufactured	No	170	Each	70.0000	4	16	DAS 8 9-09
D4625-1						**		
Tube Cap								

Location

Loc Qty

Loc Code

ST114

70

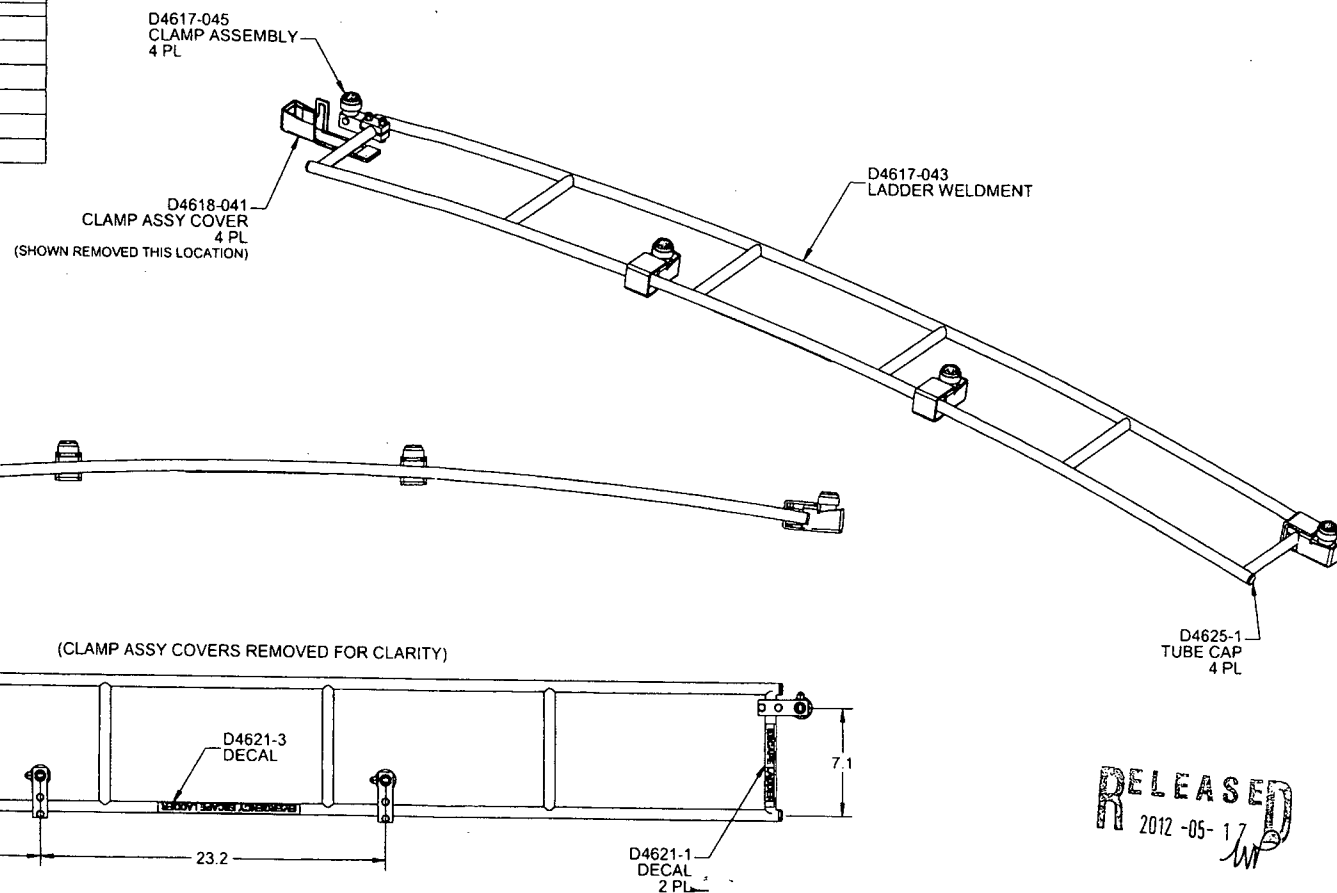
83122

70

16

MAR 23 2016

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-041	EMERGENCY ESCAPE LADDER
1	1	D4617-043	LADDER WELDMENT
2	4	D4617-045	CLAMP ASSY
3	4	D4618-041	CLAMP ASSY COVER
4	2	D4621-1	DECAL
5	1	D4621-3	DECAL
6	4	D4625-1	TUBE CAP



D4617-041 EMERGENCY ESCAPE LADDER

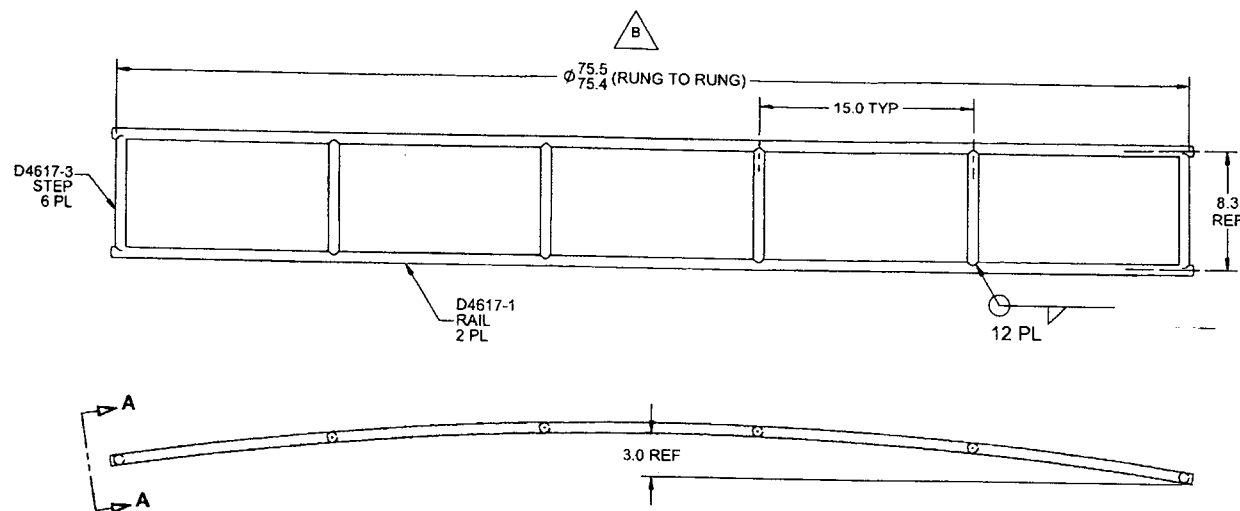
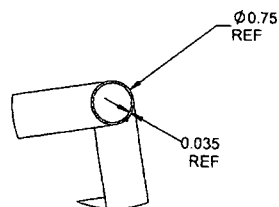
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4617-041" AND BATCH NUMBER PER QSI044 6.6
- 7) WEIGHT: 6.48 lbs

B	75 4-75.5 WAS 75.7 (C4-2) WASHER WAS NAS 1149C0463R, QTY 3 ON SHT 4. 0.753-0.756 WAS 0.750-0.753 (B4-5)	RP	12.05.01
A	NEW ISSUE	RP	12.04.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP	DRAWING NO.	REV. B
CHECKED	A.P.	D4617	SHEET 1 OF 5
MFG. APPR.		TITLE	SCALE
APPROVED		EMERGENCY ESCAPE LADDER	NTS
DE APPR.		COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	12.05.01		

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2012-05-17

120151207 SA 139768



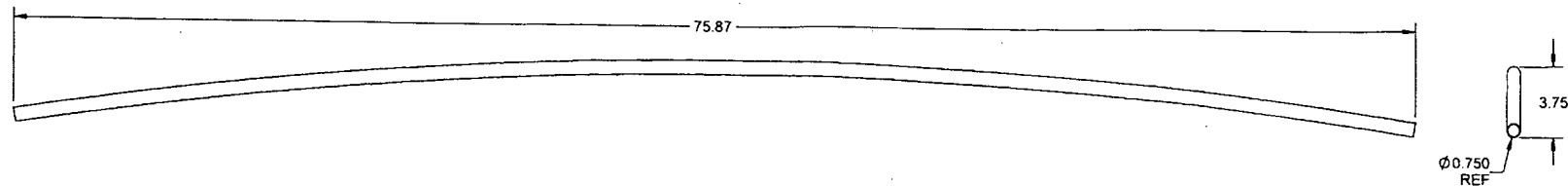
D4617-043 LADDER WELDMENT

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2012-05-17

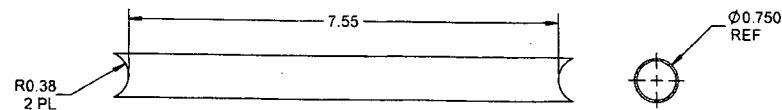
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 4.5 lbs
- 8) WELDING: PER DART QSI 004

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
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D4617-1 RAIL



D4617-3 STEP

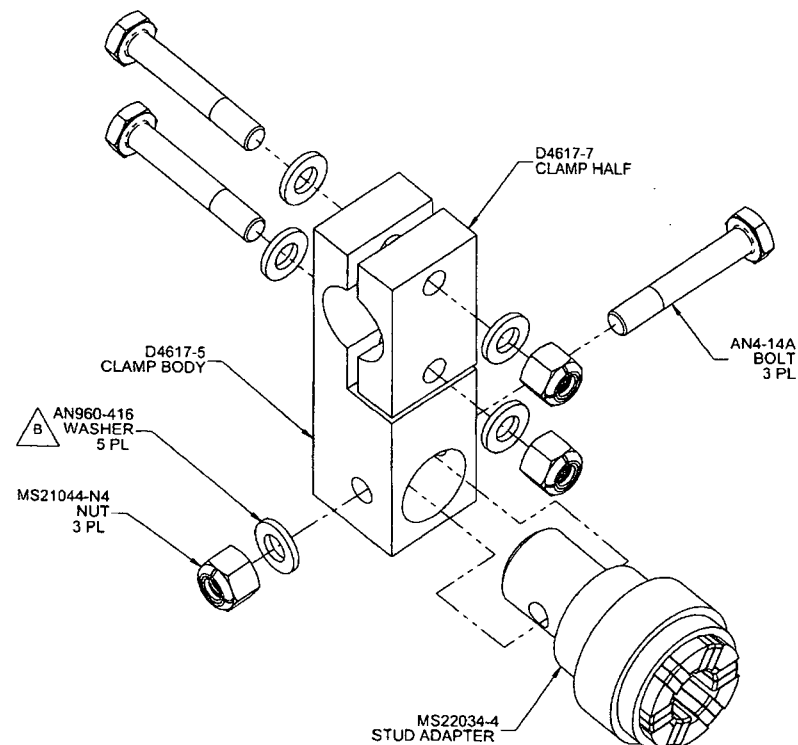
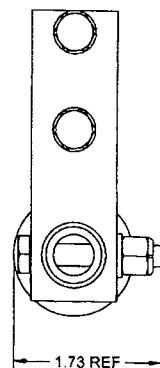
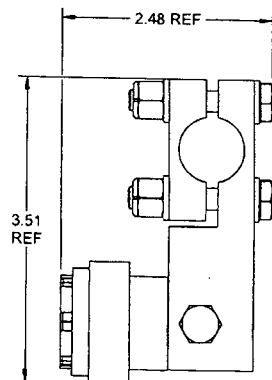
RELEASED
2012-05-17

NOTES:

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T6736
OR AMS6371, 6360, 6361, 6362, 6373, 6374
REF DART SPEC M4130NT0.750W.035
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: D4617-1 1.7lbs
D4617-3 0.17lbs

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	A.P.	DRAWING NO. D4617	REV. B
MFG. APPR.			SHEET 3 OF 5
APPROVED		TITLE	SCALE
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ITEM	QTY	P/N	DESCRIPTION
	X	D4617-045	CLAMP ASSEMBLY
1	1	D4617-5	CLAMP BODY
2	1	D4617-7	CLAMP HALF
3	3	AN4-14A	BOLT
4	5	AN960-416	WASHER
5	3	MS21044-N4	NUT
6	1	MS22034-4	STUD ADAPTER



D4617-045 CLAMP ASSY

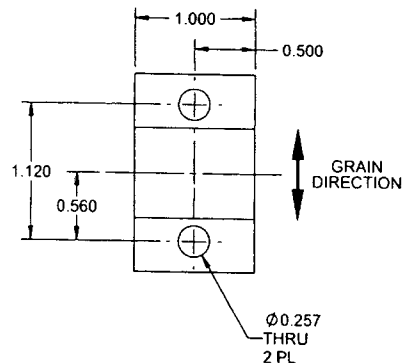
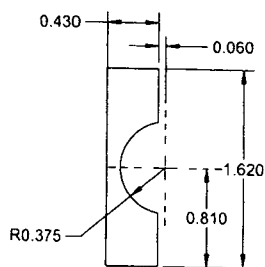
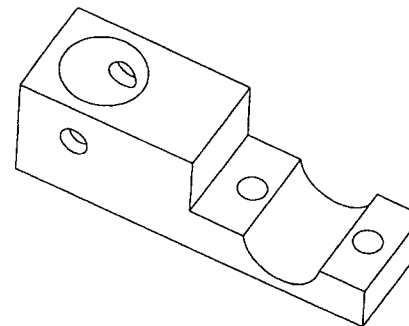
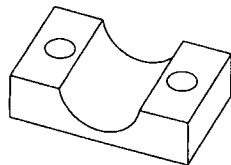
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2012-05-17

NOTES:

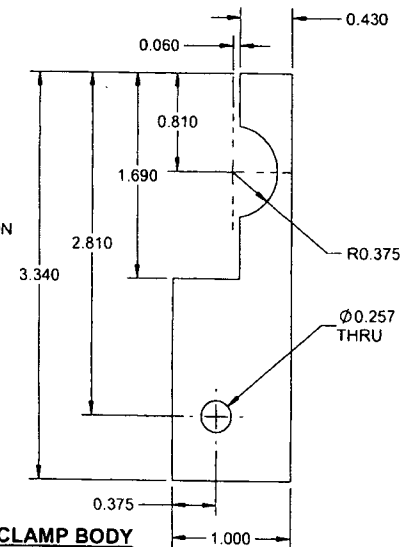
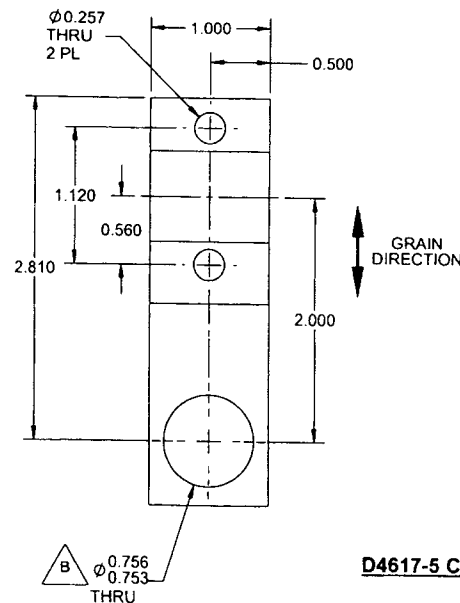
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 0.5 lbs

DESIGN	RP	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4617	REV. B
MFG. APPR.			SHEET 4 OF 5
APPROVED		TITLE EMERGENCY ESCAPE LADDER	SCALE NTS
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8 7 6 5 4 3 2 1



D4617-7 CLAMP HALF



D4617-5 CLAMP BODY

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR
AMS 4117/4128/4115/4116 OR QQ-A-200/8
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.6 OR 6.7
- 7) WEIGHT: D4617-5 0.17 lbs
D4617-7 0.05 lbs
- 8) POSSIBLE SUPPLIER: D4617-5: EAGLE P/N 212-110-06
D4617-7: EAGLE P/N 212-110-07

RELEASE
2012-05-17

DESIGN	RP	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.		D4617	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		EMERGENCY ESCAPE LADDER	NTS
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8 7 6 5 4 3 2 1